

REMARKS

Claims 1-38 are currently pending. By this Amendment, claims 21-31 and 35-37 have been canceled and new claims 39-52 have been added. Accordingly, claims 1-20, 32-34, and 38-52 are currently at issue.

Claims 1-9 and 32-34

In the Office Action, claims 1-9 and 32-34, and 38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Nos. 5,222,615 (“Ota ‘615”), 5,092,474 (“Leigner”), 5,762,221 (“Tobias”), and 6,044,997 (“Ogg”), in view of U.S. Patent Nos. 4,749,092 (“Sugiura”), 5,238,129 (“Ota ‘129”), 5,740,934 (“Brady”), 4,877,141 (“Hayashi”), and 3,923,178 (“Welker”), and further in view of Wiley Encyclopedia of Packaging Technology (“Wiley”). Applicant submits that, in view of the amendments to claim 1 herein, claims 1-9 and 32-34 are patentable over the cited references.

Claim 1, as amended, includes, among other elements, “the panel sections and the corners cooperate to define the entire periphery of the body portion, such that the entire periphery of the body portion has a smooth outer contour uninterrupted by ribs, stress absorbing strips, raised areas, or recessed areas.” Applicant submits that none of the cited references discloses a container exhibiting these elements, and also that the cited references, when taken as a whole, do not disclose, teach, or suggest designing a container containing these elements.

Ota ‘615, which the Office Action primarily refers to, contains structured collapse panels (13) defined within the sidewall panels of the container, and separated by lands (14). The Office Action asserts that Ota ‘615 discloses that the ribs (15) are optional and that Ota ‘615 is therefore considered to disclose panel sections with flat outer surfaces.¹ However, claim 1, as amended herein, recites that the entire periphery of the body portion has “a smooth outer contour uninterrupted by ribs, stress absorbing strips, raised areas, or recessed areas.” The collapse panels (13) in Ota ‘615 appear to be both recessed and defined on all sides by a rib or similar

¹ Applicant disagrees that the ribs (15) of Ota ‘615 are disclosed as optional. While Ota ‘615 does say that the panels (13) “preferably” have ribs (15), Ota ‘615 does not describe any embodiment that does not contain such ribs. Additionally, the following description (Col. 4, Lines 15-30) does not depict the ribs as optional features.

structural feature. Thus, even if the ribs (15) are omitted from Ota '615, the container disclosed therein does not contain the smoothly contoured outer periphery as recited in amended claim 1.

The other cited references, taken either alone or together, also do not disclose a hot fill container having panel sections forming a smoothly contoured outer periphery, as recited in claim 1. The container disclosed by Leigner contains recessed panels (26). (See Leigner, FIG. 6). The containers disclosed by Tobias and Ogg have highly structured vacuum panels (26, Tobias) (12,13, Ogg) containing both raised and recessed areas. (See Tobias, FIG. 1; Ogg, FIG. 1). The container disclosed by Ota '129 contains collapse panels (6) similar to those of Ota '615. (See Ota '129, FIG. 1). The containers disclosed by Hayashi all have recessed panels (3,21). (See Hayashi, FIGS. 1, 4, 7, 9, 11). Welker discloses a container with flat panels (30, etc.), but having a sharp, angular contour rather than a smoothly contoured periphery. (See Welker, FIG. 3). Sugiura also discloses a container with flat panels (7), but the panels are separated by vertical ribs (6), as explicitly stated in Sugiura. (See Sugiura, Col. 2, Lns. 26-29, FIG. 1). Brady does not disclose a hot fill container, and also does not disclose panels having a planar configuration or a smoothly contoured outer surface. As stated by Brady, in the unpressurized condition, the panels (32) have a "curved cross section" and the area between the panels has a "decidedly angular configuration" (Brady, Col. 3, Lns. 39-43), and in the pressurized condition, the panels (32) disappear entirely to form a cylindrical outer surface (Brady, Col. 3, Lns. 37-39). Wiley also does not purport to disclose hot fill containers in the photograph on P. 83. Thus, Wiley does not disclose that the depicted containers have flexible vacuum panels. Also, it is not clear whether the containers in the photograph on P. 83 of Wiley have planar or curved sides.

Additionally, Regarding Brady and Wiley, it is significant that the containers disclosed by Brady and the containers shown in the photograph in Wiley are not disclosed for use as hot fill containers. Hot fill containers are not simply "containers that are subject to pressure differentials," as stated in the Office Action (P. 3, Ln. 5). Rather, hot fill containers are specifically designed for hot filling, which creates a vacuum inside the bottle. The design of vacuum panels in hot fill containers is an important concern, as evidenced by the number of patents directed to such panels, including some of the cited references. Regarding Wiley, even if

flat panel sections can be discerned from the small photograph on P. 83 (which is questionable), the containers are not disclosed as hot fill containers. Thus, one skilled in the art would not look to such containers in designing a hot fill container, where the structure of the vacuum panels is such an important concern. Likewise, regarding Brady, it is significant that the container is designed for filling with a pressurized fluid, containing high internal pressure (See Brady, Col. 3, Lns. 37-43), rather than for hot filling, where a vacuum is created inside the bottle. Brady does not purport to relate to designing containers to handle negative internal pressure. Again, the structure of the vacuum panels in hot fill containers is an important design concern, and the concerns of a designer when designing vacuum panels to adapt to negative internal pressures after filling are very different from the concerns when designing a sidewall to adapt to positive internal pressures after filling. One skilled in the art, when designing vacuum panels for a hot fill container, would not look to references (like Brady) that did not purport to provide benefits for hot fill containers. Accordingly, the teachings of Brady and Wiley are not properly combinable with those of the other cited references that involve hot fill containers.

Further, the cited references teach away from the use of flat vacuum panels and a smoothly contoured body portion in hot fill containers. As described above, the vacuum panel portions of all of the hot fill containers described in the cited references contain ribs, sharp angles, recesses, raised portions, and other such structural features, and none of the containers has a smoothly contoured, uninterrupted outer surface. In fact, the Examiner has previously acknowledged the strong teachings in the prior art that would discourage or teach away from the use of flat sidewall panels in designing a hot fill container. (See Office Action Mailed 4/18/2006, P. 5-6, "In fact, when one views the art taken as a whole, the clear message one gets is that the reinforcement to the panels was an improvement to the earlier panels without reinforcement."). Thus, one skilled in the art would not be motivated to design a hot fill container with flat panels that flex to react to pressure differentials. Rather, as acknowledged by the Examiner, the prior art would motivate one skilled in the art to incorporate various structural features, such as conventional recessed vacuum panels, in the sidewalls of a hot fill container. The fact that Applicant has designed a hot fill bottle that contains flat, unstructured panels acting

as vacuum panels, while still exhibiting satisfactory performance, represents an advancement over prior hot fill bottles.

Accordingly, because the Office Action does not identify all of the elements of claim 1 in the cited references, and also because the cited references teach away from the proposed combinations, no prima facie case of obviousness has been established with respect to claim 1.

Claims 2-9 and 32-34 depend from claim 1 and contain all the elements thereof. Thus, for the reasons described above with respect to claim 1, no prima facie case of obviousness has been established with respect to claims 2-9 and 32-34.

Claim 38

In the Office Action, claim 38 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Nos. 5,222,615 ("Ota '615"), 5,092,474 ("Leigner"), 5,762,221 ("Tobias"), and 6,044,997 ("Ogg"), in view of U.S. Patent Nos. 4,749,092 ("Sugiura"), 5,238,129 ("Ota '129"), 5,740,934 ("Brady"), 4,877,141 ("Hayashi"), and 3,923,178 ("Welker"), and further in view of Wiley Encyclopedia of Packaging Technology ("Wiley"). Applicant submits that, in view of the amendments herein, claim 38 is patentable over the cited references.

Claim 38, as amended, recites that the container has two horizontal, elevated ridges "disposed around the periphery of the container," and that "the flat outer surface of each of said sidewalls extends from the first elevated ridge to the second elevated ridge and between the respective corners adjoining the sidewall." Accordingly, the containers disclosed by Ota '615, Leigner, Tobias, Ogg, Ota '129, and Hayashi, all of which have recessed and otherwise structured panels, do not disclose such flat panels. Regarding Sugiura and Welker, even if the references disclose flat panels, neither Sugiura nor Welker discloses that the panels extend from one horizontal, elevated ridge to a second horizontal, elevated ridge.

Regarding Brady and Wiley, as stated above, even if the claimed panels are considered to be disclosed, Brady and Wiley do not disclose hot fill containers, and thus, are not proper for reference for the disclosure of vacuum panels in hot fill containers in forming an obviousness rejection. In particular, claim 38 recites that the claimed panels "act as vacuum panels," and

neither Brady nor Wiley discloses vacuum panels that are designed to react to negative internal pressures after a container is filled and capped.

Additionally, as stated above with respect to claim 1, the cited references teach away from the design of a hot fill container having flat vacuum panels. These arguments apply equally to claim 38.

Accordingly, because the Office Action does not identify all of the elements of claim 38 in the cited references, and also because the cited references teach away from the proposed combinations, no prima facie case of obviousness has been established with respect to claim 38.

Claims 10-20

In the Office Action, claims 10-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Wiley in view of U.S. Patent Nos. 5,897,901 (Visioli) and 5,616,353 (Wright). Applicant respectfully submits additional arguments traversing the rejections of claims 10-20.

Applicant submits, with respect to independent claims 10 and 16, that none of the cited references disclose, teach, or suggest the use of a multilayer structure of polypropylene, EVOH, regrind, and polyamide layers. As noted in the Office Action, all of these polymers are known for use in containers, and none of the references discloses the exact multilayer structure that utilizes the claimed layers in the order claimed. The Office Action asserts that it would be obvious to substitute polyamide for the inner polypropylene layer in the PP/EVOH/adhesive/regrind/adhesive/PP structure shown in FIG. 4 of Wiley (P. 360). However, the Office Action has not articulated an objective rationale for one skilled in the art to modify the teachings of Wiley to reach the claimed structure. Applicant submits that the invention recited in claims 10 and 16 is not simply the replacement of one layer with a polyamide layer, but the overall combination of layers, including polypropylene, EVOH, regrind, and polyamide layers, in the order recited. As similarly stated in Applicant's previous response, the simple picking and choosing of polymers from the prior art constitutes hindsight reconstruction, without such an articulated rationale for using the layers in the recited combination. Such hindsight reconstruction is not sufficient to form a prima facie case of obviousness under § 103(a).

Additionally, Applicant notes that the barrier layer construction referred to in FIG. 4 of Wiley appears to have the regrind layer near the outer side (presumably the top) of the sheet and the EVOH layer near the inner side (presumably the bottom) of the sheet. Thus, if the configuration of the layers are as such, the order of these layers must be reversed in order to reach the claimed structure. The Office Action provides no rationale for one skilled in the art to modify the teachings of Wiley in this manner.

Accordingly, because the Office Action does not provide the required rationale for modifying the teachings of Wiley to reach the claimed structure, and relies instead upon impermissible hindsight reconstruction, a prima facie case of obviousness has not been established with respect to independent claims 10 and 16, as well as dependent claims 11-15 and 17-19 depending therefrom.

New Claims 39-52

Applicant submits that new claims 39-52 are patentable, for the reasons briefly articulated below.

Claim 39 includes, among other elements, "the flat panel sections and the smoothly rounded corners cooperate to define the entire periphery of the body portion, such that the entire periphery of the body portion has a smooth outer contour uninterrupted by structural features." This element is similar to the elements discussed above with respect to claim 1, and, for the same reasons, the cited references do not disclose this element. Claim 39 also includes other elements that are not disclosed by the cited references, including, "when the panel sections are in the respective planar configurations, the body portion has a cross-sectional area that is substantially unchanged throughout the body portion." Accordingly, claim 39, and claims 40-50 depending therefrom, are patentable over the cited prior art references.

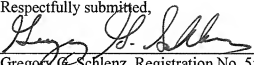
New claims 51 and 52 depend from claim 1, and are patentable over the cited references for the same reasons as claim 1.

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration of the Examiner's rejections and allowance of claims 1-20, 32-34, and 38 in the present Application. Applicant also requests examination and allowance of new claims 39-52 in the present Application. Applicant submits that the Application is in condition for allowance and respectfully requests an early notice of the same.

Please charge all fees in connection with this communication to Deposit Account No. 19-0733.

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